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BIOLOGICAL EVALUATION OF
A WESTERN PINE BEETLE INFESTATION
IN THE BUTTE CREEK DRAINAGE,
CLEARWATER NATIONAL FOREST, IDAHO
September 1959

Archibald Tunnock, Jr., Entomologist

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Prepared By The
Missoula Forest Insect Laboratory
Missoula, Montana

BIOLOGICAL EVALUATION OF A WESTERN PINE BEETLE INFESTATION
IN THE BUTTE CREEK DRAINAGE, CLEARWATER NATIONAL FOREST, IDAHO
September 1959

Archibald Tunnock, Jr., Entomologist
Division of Forest Insect Research

A routine aerial survey made by personnel of the Missoula Forest Insect Laboratory on September 24, 1959 over the Clearwater National Forest, Idaho, disclosed a large group of red-topped ponderosa pine trees within the West Fork Butte Creek drainage (SE. 1/16, Sec. 1, T. 40 N., R. 5 E., Boise Mer.). It was not possible to identify the cause of this damage from the air, but the possibility that the group of dying pine trees either contained, or were the source of, epidemic populations of bark beetles warranted further investigation. Accordingly, the group of ponderosa pine trees was examined for cause of death on October 27, 1959 by the writer, accompanied by Mr. William Walker, forester; Dr. Otis Malloy, pathologist; and Mr. William Marr, forester, all of Potlatch Forests Inc., Lewiston, Idaho.

RESULTS

The western pine beetle, Dendroctonus brevicomis, was found to be responsible for the death of the pine trees. There were about 150 dead trees, ranging in size from 18 to 36 inches in diameter, scattered over an 8-acre area. It was judged from the color and quantity of needles remaining on the trees that the infestation started about 1956. The beetle population that had attacked during the summer of 1958 was heavily fed upon by woodpeckers during the winter of 1958-1959. These avian predators probably reduced the beetle brood to an ineffective attacking force, because no 1959-attacked trees were detected in the immediate area of the dead trees. Trees attacked early in the summer of 1959 by the new adult beetles developed in the dead trees during the winter of 1958-1959 would have been visible and thus detected at the time of the aerial examination in October because of their fading foliage. The absence of such infested trees indicated a dearth of beetles during the summer of 1959 and was reason to suspect the infestation had collapsed during the winter of 1958-1959.

There appears to be no cause for concern at the prospect of continued tree killing in the immediate future in this general vicinity. The dead trees fortunately are near logging roads, affording an opportunity for salvage by the State of Idaho, owner of the land and timber.

DISCUSSION

Epidemics of D. brevicornis in isolated stands of ponderosa pine within the above forest have been infrequent. However, the great value of this tree species in the Clearwater warrants the detection of possible further attacks by this forest insect pest, particularly along the ridges east of the infestation just reported.